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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****OFFICIAL****RECEIVED  
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In re application of: Lakram

PATENTS

Serial No. 10/055,331

Group Art Unit: 3617

Filed: 01/25/2002

Examiner: Basinger

For: UNSINKABLE VESSEL SYSTEM

**BRIEF ON APPEAL**1) **Real Party in Interest**

The real party in interest is the inventor/appellant.

2) **Related Appeals and Interferences**

There are no other related appeals or interferences.

3) **Status of Claims**

Claims 38-56 are all the claims in this case. Claims 38, 39, 43 and 45 are rejected. Claims 40-42, 44, and 46-56 are objected to. Claims 38, 39, 43 and 45 are on appeal.

4) **Status of Amendments**

No amendment has been filed by the appellant subsequent to the final rejection.

5) **Summary of Invention**

The invention will be described only as it relates to the claims on appeal.

This invention may be best understood with reference to Figs. 14, 26, 31, and 37.

This invention relates to a system for rendering vessels unsinkable (paragraph 51).

To be a suitable vessel for this system, the vessel must have an engine, a hull, and a ceiling (Fig. 14). The system is made up of an air compressor which feeds air under pressure to a compression chamber, a compression chamber which feeds air under

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pressure to at least one inflatable airbag and at least one inflatable airbag which is stored on the ceiling of the hull (paragraph 50 and Fig. 31). Preferably, the compressor contains overlapping impeller blades (paragraph 52).

6) Issues

a) Whether claims 38 and 39 are properly rejected under 35 USC 103(a) as being unpatentable over Ryczek in view of Lee et al.

b) Whether claim 43 is properly rejected under 35 USC 103(a) as being unpatentable over Ryczek and Lee et al as applied to claim 38 above in view of Beck et al.

c) Whether claim 45 is properly rejected under 35 USC 103(a) as being unpatentable over Ryczek and Lee et al as applied to claim 38 above in view of Day.

7) Grouping of Claims

Claims 38, 39, and 43, are considered as a single group and the patentability of this group will stand or fall with the patentability of claim 38.

Claim 45 is considered separately.

8) Arguments

Regarding claims 38, 39, and 43, Section 102 of Title 35 states that a person shall be entitled to a patent unless-. It is thus the burden of the PTO to establish that the inventor should be denied a patent on his invention. In order to meet this burden in situations involving obviousness, the PTO must resolve the four Graham factual inquiries. The four inquiries are: determining the scope and content of the prior art, ascertaining the differences between the prior art and the claims at issue, resolving the level of ordinary skill in the pertinent art, and considering objective evidence present in

the application indicating obviousness or nonobviousness.

In the decision of Q. Todd Dickinson, Acting Commissioner of Patents and Trademarks, *Petitioner v. Mary E. Zurko et al.*, 50 USPQ2d 930 (Sup. Ct. 1999), all parties agreed, and the Court held, that the PTO is an "agency" subject to the APA's constraints.

That the Supreme Court is serious concerning holding agencies accountable to their duties under Title 5 is made clear in the decision of *Burlington Truck Lines v. U.S.*, 371 U.S. 156, 83 S. Ct. 239, 9 L.Ed. 2d 207 (1942) wherein the Supreme Court faulted the ICC for failure to make findings and an analysis to justify its choice between two different available and apparently adequate remedies.

That the CAFC is serious concerning holding the PTO accountable for its duties stated in 5 USC 557 is made clear in the concurring opinion of Judge Gajarsa in the decision of *Arjun Singh v. Anthony J. Brake* 55 USPQ2d 1673 (CAFC 2000). Judge Gajarsa stated:

On remand, the Board should keep in mind our admonition in *Gechter v. Davidson*, 43 USPQ2d 1030, 1043 (Fed. Cir. 1997) that "necessary findings must be expressed with sufficient particularity to enable our court, without resort to speculation, to understand the reasoning of the Board." Cf. 5 U.S.C. 557(c) (requiring that "all decisions" in formal adjudications, whether preliminary or final, "include . . . findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record." A detailed account of the underlying evidence supporting a finding of fact, or the underlying facts supporting a conclusion of law, does more than exert discipline on the Board and expose its reasoning to the light of public scrutiny. It provides this court with a meaningful opportunity to determine whether the Board has strayed from the boundaries of its statutory authority. In this way, both the Board and this court benefit.

That the BPAI is serious in administering its responsibilities derived from Title 5 is indicated in the decision of A.S., Junior Party, v. B.R., Senior Party. 1998 Pat. App Lexis 10 (BPAI 1998).

In making its decision that the CAFC should review decisions of the PTO Board of Patent Appeals and Interferences using the court/agency standard rather than the court/court standard, the Court stated that Congress has set forth the appropriate standard in the APA. Some of these standards as set forth in Section 557 of Title 5 are:

Before a recommended, initial, or tentative decision, or a decision on agency review of the decision of subordinate employees, the parties are entitled to a reasonable opportunity to submit for the consideration of the employees participating in the decisions - (1) proposed findings and conclusions; or (2) exceptions to the decisions or recommended decisions of subordinate employees or to tentative agency decisions; and (3) supporting reasons for the exceptions or proposed findings or conclusions. The record shall show the ruling on each finding, conclusion, or exception presented. All decisions, including initial, recommended, and tentative decisions, are a part of the record and shall include a statement of - (A) findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record; and (B) the appropriate rule, order, sanction, relief, or denial thereof. (emphasis supplied)

Thus, the record must show not only the Examiner's finding and conclusions, of each of the four Graham factual inquiries, but also the reasons for these conclusions on all material issues of fact, law, or discretion.

A determination as to whether a valid rejection has been made begins with ascertaining that the PTO policy regarding the guidelines laid down by the Supreme Court in *Graham v. John Deere*, 148 USPQ 459 (Sup. Ct. 1966) has been carried out in accordance with the requirements set forth in 5USC 557.

The first Graham inquiry is the determination of the scope and content of the prior art.

It appears that the Examiner has erred in determining the scope and content of the prior art.

Where the claims require that the airbags be stored on the ceiling of the hull, the primary reference discloses that the airbags are stored in casings on the floor of their respective compartments. The Examiner's comments regarding the airbags of the primary reference are "[t]he inflatable airbag is 24. The air bag 24 is not stored on the lower surface of the ceiling of the compartments."

The Examiner is relying on the fact that the reference teaches the existence of an airbag, but is ignoring the fact that the reference requires that the airbag be in a casing and that the very nature of the invention requires that the casing be unlocked and the door of the casing must be free to swing and create a safety hazard if placed on the ceiling. All of the teachings of a reference must be considered. See the decision of *Bausch & Lomb v. Barnes-Hind/Hydrocurve, Inc.* 230 USPQ 416, (Fed. Cir. 1986), wherein it was stated:

The district court also failed to consider the Caddell reference in its entirety and thereby ignored those portions of the reference that argued against obviousness.

In view of the above, it is believed that the Examiner has not resolved the first Graham factor.

The second Graham factor is ascertaining the differences between the prior art and the claims at issue. It appears that the Examiner has not properly resolved the second Graham factor.

The claims require that the inflatable airbags be stored on the ceiling of the hull. The Examiner states that Lee et al disclose inflatable air bags which are stored on the lower surface of the ceilings of the compartments. The fact is that the reference does not teach air bags at all. It teaches bags which will be filled with carbon dioxide, not air. See page 2, left column, line 20, in this regard. Also, these bags are connected to flasks, not compression chambers which are fed by air compressors.

The Examiner indicated:

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to replace the air bags of Ryczek with air bags similar to those of Lee et al such that the air bags are stored on the lower surface of the ceilings of compartments 11-13 of Ryczek.

This cryptic reasoning offers precious little help to an applicant trying to further the prosecution of the application. This rejection seems to assume on one hand that the airbags of Ryczek will be replaced with containers similar to those of Lee et al. On the other hand, this rejection assumes that such a substitution will result in bags being stored on the lower surface of the ceiling.

Clearly, if the airbags of Ryczek were to be replaced with the airbags similar to the containers of Lee et al, one would have a closure on the floor having a lid, which closure contained a container similar in some respect to the container of Lee et al. This would not result in the subject matter which is being claimed.

The third factual inquiry is to determine the level of skill possessed by one skilled in this art. In spite of Appellant's pleading for this determination to be made and communicated to Appellant so that Appellant could be assured that a decision as to obviousness was based on an objective standard, the Examiner has repeatedly chosen to

refrain from making this determination. Is one of ordinary skill a passenger on a ship, a deck hand, a ship captain, or a nautical engineer?

Regarding the necessity of determining the level of ordinary skill in the pertinent art, the comments of the CAFC are pertinent and should be persuasive. The Fed. Cir. stated in the decision of *Ryko Manufacturing Co. v. Nu-Star, Inc.*, 21 USPQ2d 1053, 1057 (Fed. Cir. 1991):

Appellant asserts legal error in the failure of the district court to resolve the level of ordinary skill in the art. The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry. Instead of ascertaining what was subjectively obvious to the inventor at the time of invention, the court must ascertain what would have been objectively obvious to one of ordinary skill in the art at such time. Hence, the level of ordinary skill in the art is a factual question that must be resolved and considered. (Emphasis added.)

In order to apply an objective standard in determining the obviousness of Appellant's invention, it is necessary that this determination be made by the Examiner. In order to enable the Appellant to make a reasoned reply based on objective standards, the results of this determination should be conveyed to Appellant. This has not been done. Thus, the third factual inquiry required by the Graham decision has not been carried out. Should the Examiner have wished to comply with this Graham requirement, he would have had ample guidance. The decision of *Environmental Designs, Ltd. v. Union Oil Co.*, 218 USPQ 865 (Fed. Cir. 1983) offers six factors to be considered in determining the level of one of ordinary skill. These are: educational level of the inventor, type of problems encountered in the art, prior art solutions, rapidity of

innovation, sophistication of technology, and educational level of active workers in the field.

The fourth Graham factual inquiry is considering objective evidence present in the application indicating obviousness or non-obviousness.

Section 706.02(j) of the M.P.E.P. discusses three basic criteria which must be met before a *prima facie* case of obviousness can be made out.

The first of these criteria spelled out by the M.P.E.P. is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. The motivation relied upon by the Examiner is that the replacement of the airbag of Ryczek with containers similar to those of Lee et al would place the airbags in an unoccupied portion of the ship. This motivation is misplaced. The replacement of the airbags of Ryczek with the containers similar to those of Lee et al would result in containers similar to those of Lee et al in the closures of Ryczek on the floor of the compartment. This would not create any advantage. Indeed, since the containers of Lee et al are designed to be filled with carbon dioxide or other gas which is heavier than air, it would be disadvantageous to have the container at a low level.

The second criterion is that there must be a reasonable expectation of success resulting from the suggested combination of references. According to the secondary reference, when the container is charged with carbon dioxide, the expanded casing extends from ceiling to floor or from ceiling to cargo as the gas is heavier than air. If these containers were placed in the casings of Ryczek as suggested by the Examiner, they would tend to stay at a lower level due to their weight and the purpose of putting out fires



by smothering the fires would not be accomplished. Thus, the suggested substitution would not result in an expectation of success.

The third criterion is that the combination of references must teach or suggest all of the claim limitations. If the references are combined as suggested by the Examiner, the result would be a vessel having an engine and a hull having an interior and a ceiling, wherein the vessel further contained an air compressor and a compression chamber. Buoyant inflatable containers similar to those of the Lee et al reference would be stored in casings on the floor.

This contrasts with the claim under consideration which requires that the airbag be located on the ceiling. It is thus apparent that the combination of the references as urged by the Examiner would not result in the subject matter of claim 38. In view of the above, it is urged that the rejection of claim 38 is in error.

It is Appellant's position that the Examiner has not resolved the four Graham inquiry factors. Indeed, the one consistent feature of the prosecution of this application is the Examiner's persistence in failing to even acknowledge the existence of the third Graham inquiry factor. Clearly, the Examiner has not complied with the requirements of 5 USC 557 in that the record fails to shall include a statement of findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record.

The rejection of claim 45 will now be discussed.

Claim 45 depends upon claim 38, discussed above, and requires that the air compressor contains multiple overlapping impeller blades. The rejection relies upon Ryczek and Lee et al in view of the Day patent. For the reasons set forth above, it is

considered that claim 38 is patentable. It is well-settled law that once a broad independent claim is patentable over the prior art, a narrow dependent claim is likewise patentable. See the decision of In re Fine, 5 USPQ2d 1596 (Fed. Cir. 1988), in this regard.

The discussion of the four Graham inquiries set forth above is incorporated here by reference. Also, as noted earlier, Section 706.02(j) of the M.P.E.P. sets forth three basic criteria which must be met before a *prima facie* case of obviousness can be made out. These criteria will be discussed relative to claim 45.

The first of these criteria spelled out by the M.P.E.P. is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. The Examiner pointed to column 6, lines 21-34 of the Day reference in providing a suggestion or motivation in the references to combine the teachings of the references. The "suggestion or motivation" relied upon by the Examiner is that the replacement of the compressor of the Day reference for the compressor of conventional centrifugal type compressors would be suggested because of the superiority of the compressor of Day over the centrifugal type compressors. The defect in this reasoning is apparent on its face. The combination of the primary references fails to teach the use of centrifugal type compressors. Highly likely, the compressor of the Ryczek reference is the conventional piston type compressor, which is not mentioned in the secondary reference. It is considered that the Examiner has the duty of establishing that the compressor used by the primary reference should be replaced by the compressor of the Day reference. A showing that the compressor of the Day reference is superior to

some compressor which is not taught as being used in ships does not meet this requirement. As Title 5 requires that the record shall include a statement of all findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record and since the issue under consideration is a material issue, the Examiner is remiss in not setting forth his basis for assuming that the compressor of Ryczek would be the centrifugal compressor taught by the Day reference. If this is a matter of personal knowledge on the part of the Examiner, an affidavit by the Examiner should be made of record.

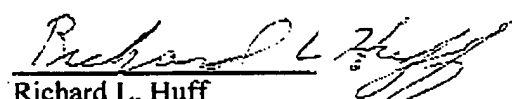
The second criterion is that there must be a reasonable expectation of success resulting from the suggested combination of references. As the primary reference is not specific as to the type of compressor, it must be assumed that any type would be expected to be operative.

The third criterion is that the combination of references must teach or suggest all of the claim limitations. Claim 45, through claim 38, requires that at least one inflatable airbag is stored on the ceiling of the hull. The combination of the references as suggested by the Examiner would lead to a vessel having an engine and a hull having an interior and a ceiling, wherein the vessel further contained an air compressor as disclosed by Day and a compression chamber. Buoyant inflatable containers similar to those of the Lee et al reference would be stored in casings on the floor. This result does not teach or suggest the claim limitation regarding the placement of the airbag. Thus, the combination of references, as suggested by the Examiner, cannot meet the third criterion required by the M.P.E.P., and it is considered that the rejection of claim 45 is improper.

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For the reasons set forth above, it is considered that the rejection of claims 38, 39, 43, and 45 is improper and should be reversed.

Respectfully Submitted,

  
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## 9) Appendix

38. In a vessel containing a hull and at least one compartment having inside walls and a ceiling, which ceiling has an upper surface and a lower surface, the improvement comprising a system which renders the vessel unsinkable, which system comprises:

- a) an air compressor which feeds air under pressure to a compression chamber,
- b) a compression chamber which feeds air under pressure to at least one inflatable airbag, and
- c) at least one inflatable airbag stored on the lower surface of the ceiling of the compartments within the vessel.

39. The vessel of claim 38, wherein the vessel contains an engine.

43. The vessel of claim 39, wherein the vessel includes a sonar warning system for warning of potential harm to the vessel.

45. The vessel of claim 39, wherein the air compressor contains multiple overlapping impeller blades.